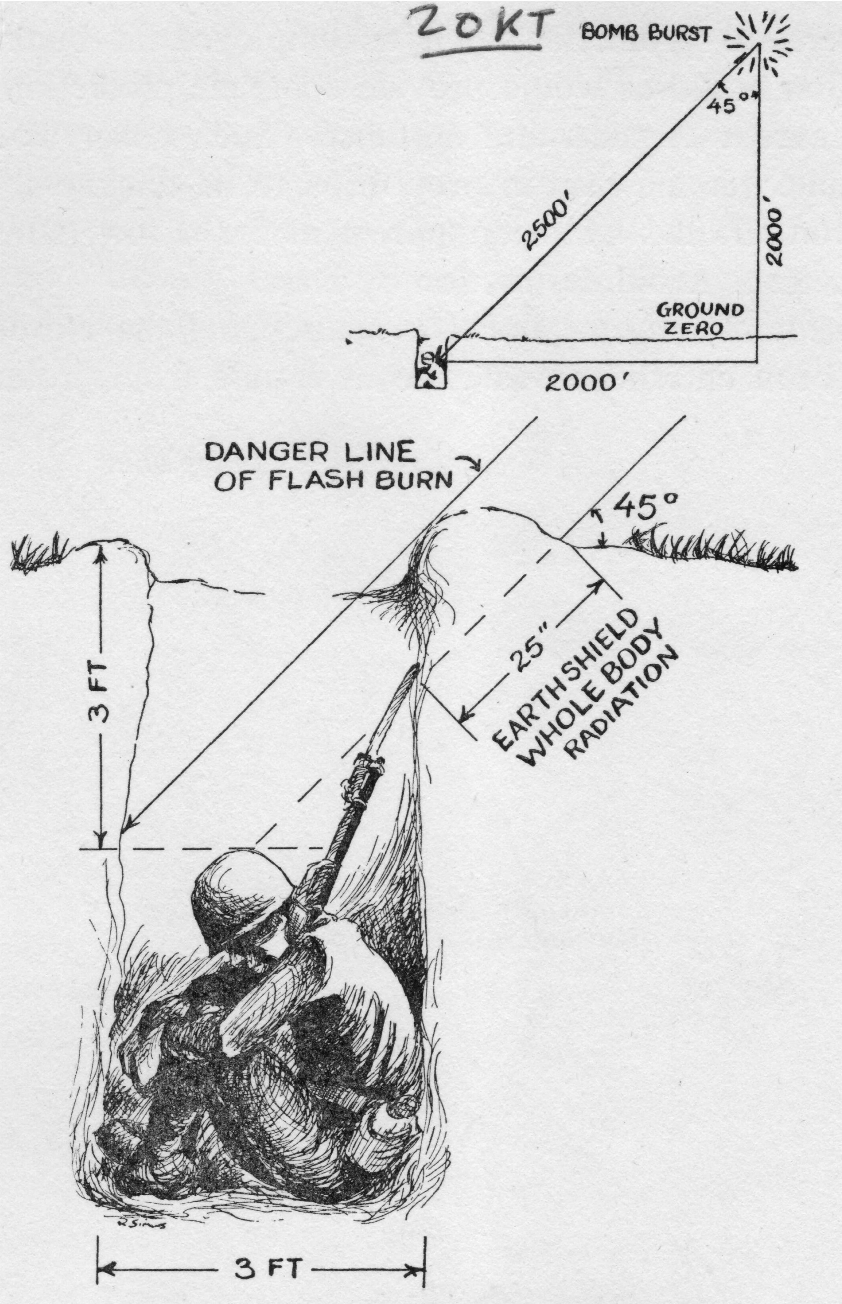

Plate 18. Foxhole Protection, Sitting.

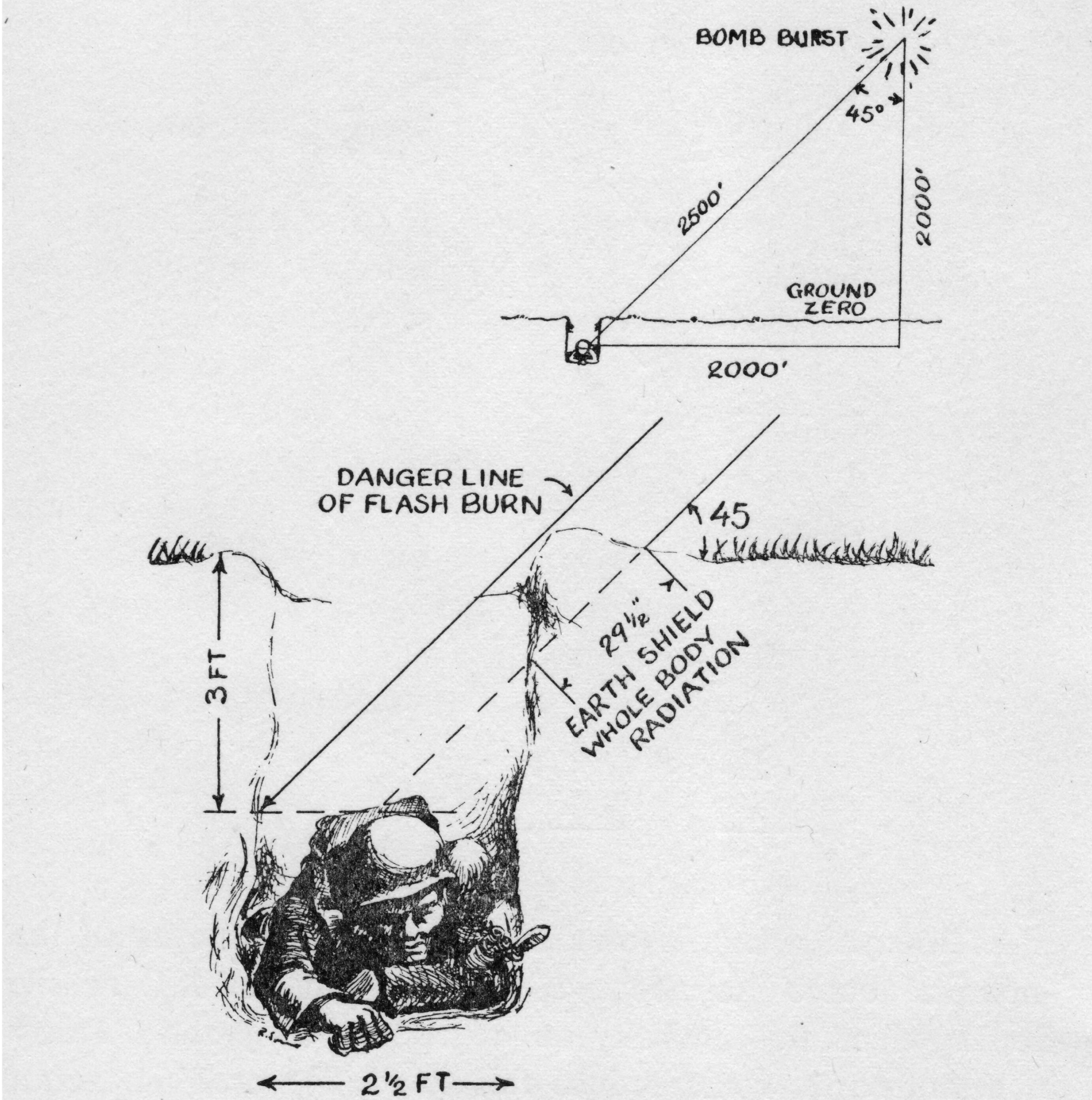

Plate 19. Foxhole Protection, Prone.

The individual pictured in plates 17, 18, and 19 is less than one half mile away.

The same digging-in procedure will safeguard equipment,

From: Colonel G. C. Reinhardt and Lt Col W. R. Kintner, Atomic Weapons in Land Combat, Military Services Publishing, Harrisburg, 2nd ed. August 1954. The Foreword by Lt General Manton S. Eddy, US Army, states: "We tend to exaggerate the threat, while almost ignoring the potent defense included in our own atomic capabilities. Instead of their effectiveness against an aggressor's mass numbers, we dwell upon overstated radiation hazards."

Page 19: "... 10 hydrogen bombs, each of 20 megaton power [air burst, clean], delivered along the West bank of the Rhine in March 1945 would have "shattered, if not destroyed" the Allied armies on the threshold of victory."

Page 65: "Friendly troops crouched down in foxholes will unquestionably be safe one mile from ground zero for the 20 kiloton or nominal bomb."

U. S. Army Photo.

PREPARATION FOR ATOMIC TEST.
Troop dummies about to undergo atomic bomb test, Camp Mercury, Nevada, 1952.

U. S. Army Phot

RESULTS OF ATOMIC TEST.
Troop dummies after atomic bomb test, Camp Mercury, Nevada, 1952.

Charles S. Grace using PDRM containing 350uCi Sr90 calibration source. Production was only 800 per year, from 1977-82

FIG. 6.5 The author using a portable dose rate meter for contamination measurement (*Author*)

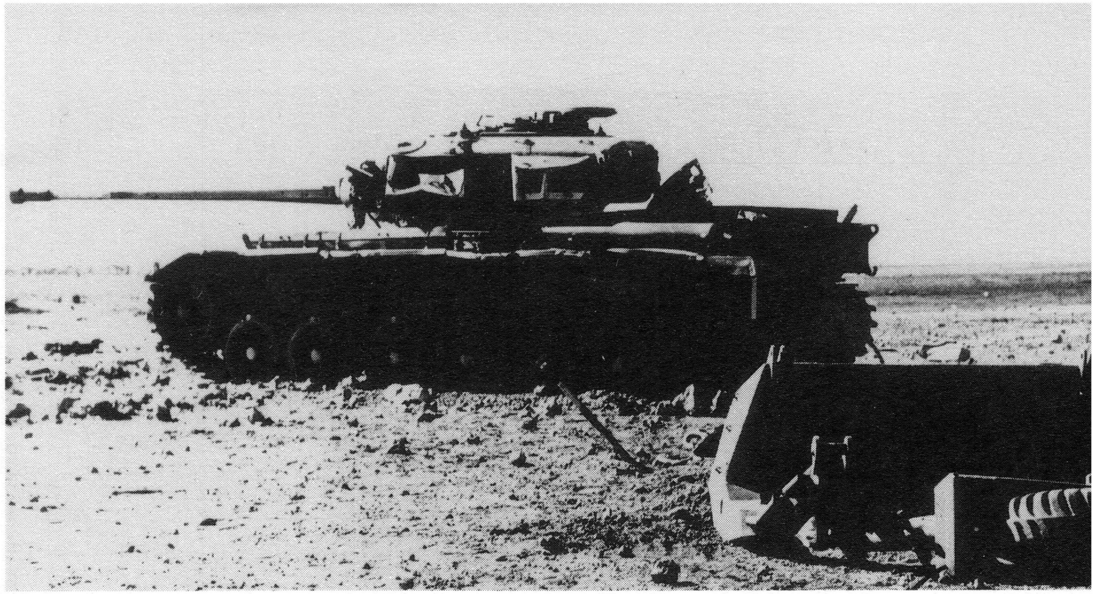

FIG. 5.5 Blast damage to vehicles (*Lft Col A P Farquar*)

Figure 5.5 shows two vehicles which were exposed to a 10-kT burst at a range of 370 m, where the PSO was 230 kPa and the peak blast wind velocity was 330 m/sec (750 mph). The tank, oriented side-on to the blast, was displaced 2.5 m with a peak acceleration of 30 *g*. It suffered moderate damage, principally to external fittings such as track guards and stowage bins, and its monotrailer was destroyed.

After the burst the tank was able to be driven off, and its gun was fired after sand and debris had been removed from the barrel. The lighter scout car was beyond repair. Had crews been in the vehicles they would have received a radiation dose of around 10^5 cGy. We shall see in the next chapter that they would have been incapacitated virtually instantaneously.

Some approximate figures for typical targets are given in Table 5.5. They are for bursts at optimum height, and the ranges are those at which 50 per cent of randomly-oriented targets (and orientation is obviously significant) suffer moderate damage. That is, they would require workshop repair before further use.

TABLE 5.5
RANGES FOR BLAST DAMAGE

	1 kT		*1 MT*	
Target	*Range (m)*	*PSO (kPa)*	*Range*	*PSO (kPa)*
tanks	170	275	2,700	150
field artillery	200	200	3,200	120
soft vehicles	300	125	4,800	60
man (prone)	240	160	3,800	100

British Totem-1 (10 kt) nuclear test effects on military field equipment, from Charles S. Grace's Nuclear Weapons: Principles, Effects and Survivability (UK Army).

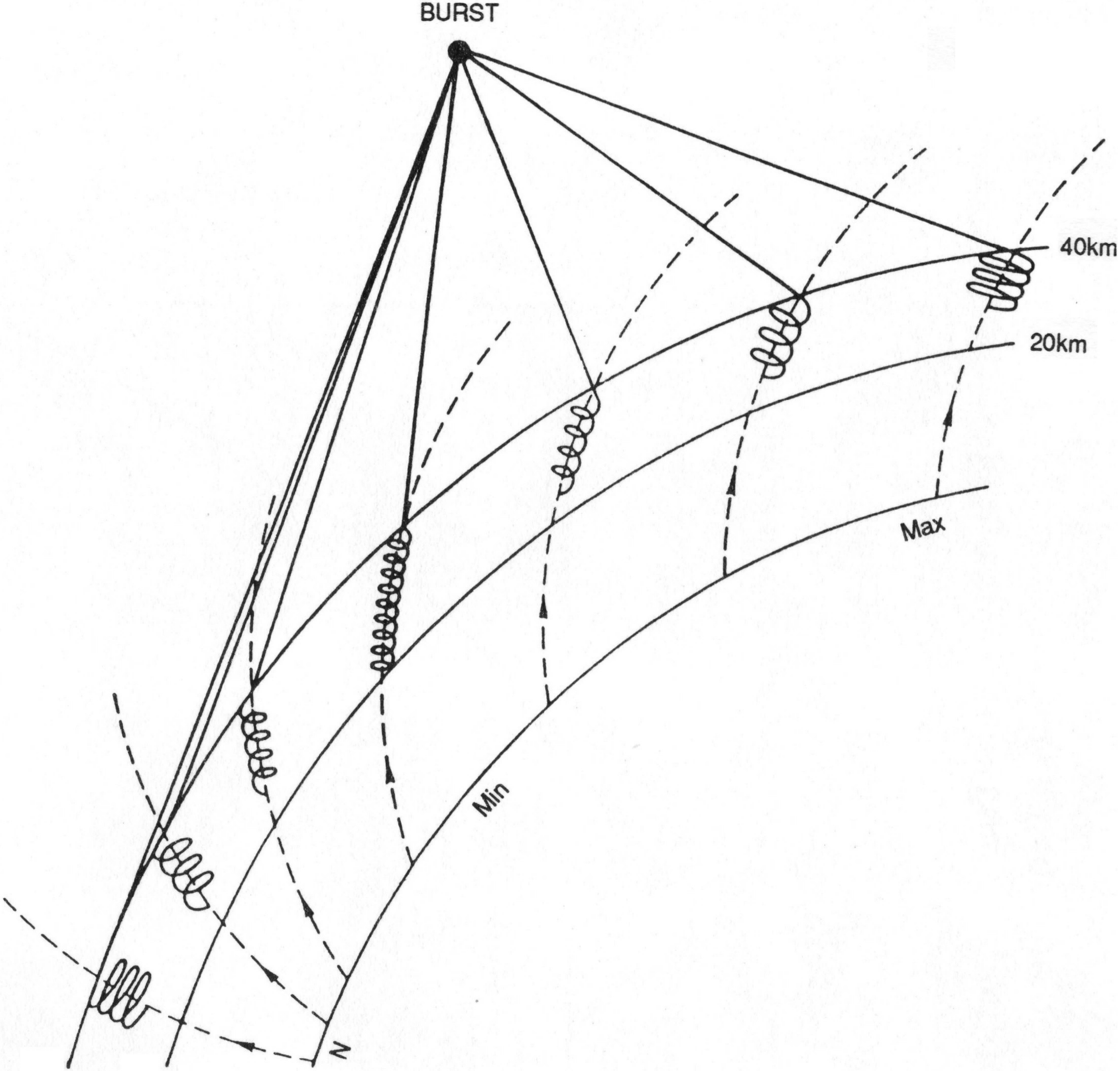
BURST
40km
20km
Max
Min
N

Figure 12.40b. Earth-moving equipment subjected to nuclear blast in open terrain (30 psi overpressure).

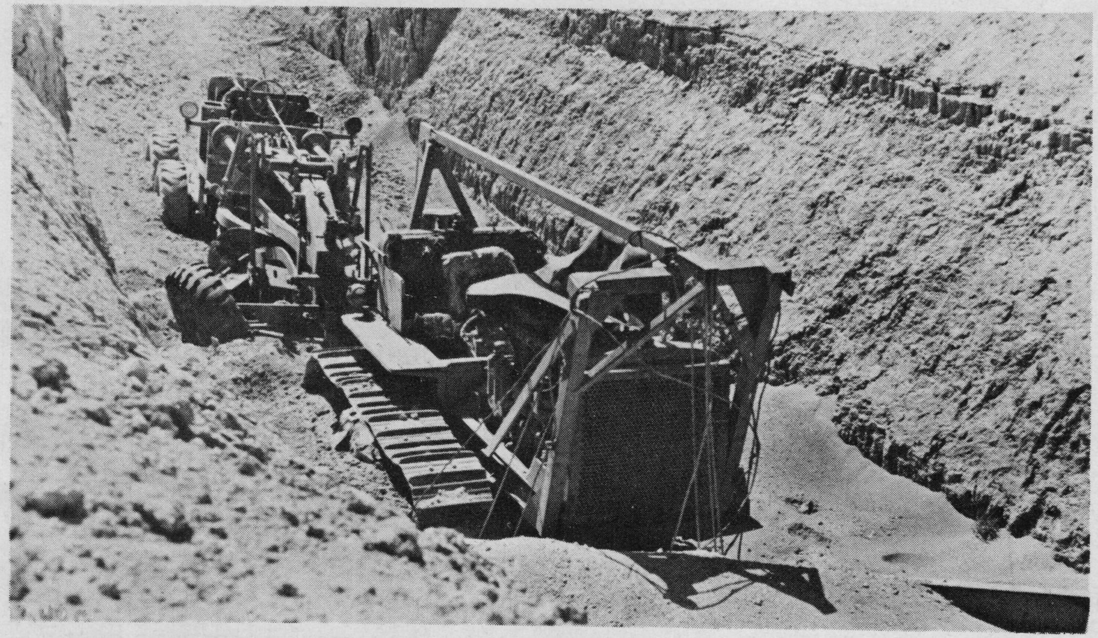

Figure 12.40c. Earth-moving equipment protected in deep trench at right angles to blast wave motion (30 psi overpressure).

Glasstone 1957 Effects of Nuclear Weapons showing blast walls factories and power stations in Nagasaki, permitting RAPID RECOVERY!

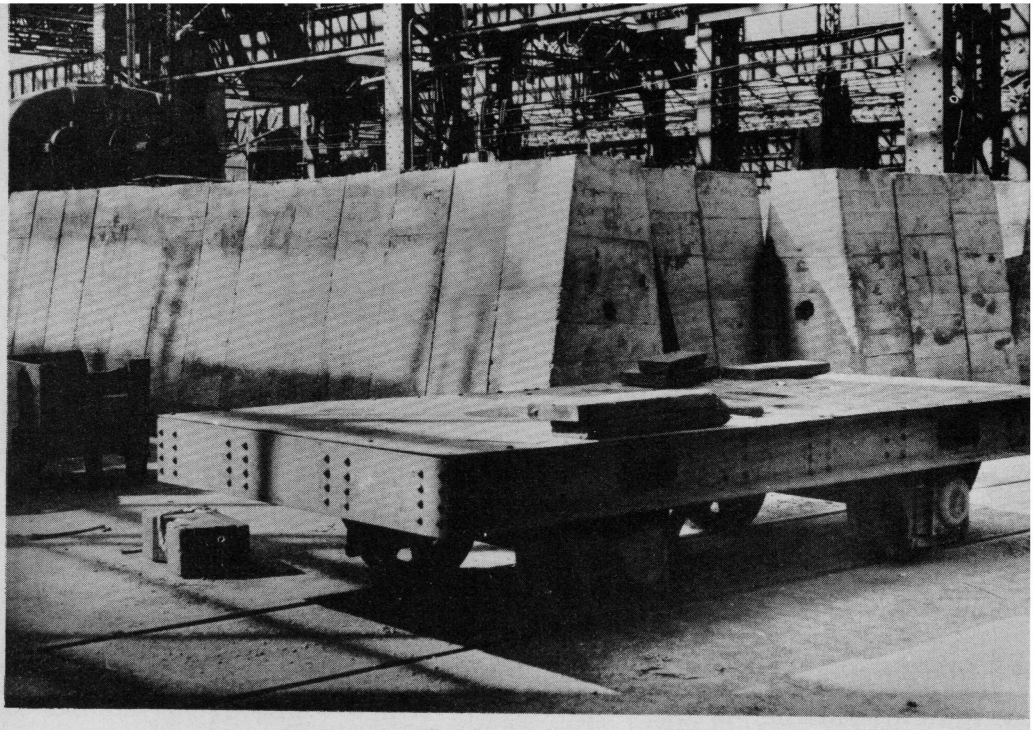

Figure 12.37a. Precast, reinforced-concrete blast walls (0.85 mile from ground zero at Nagasaki).

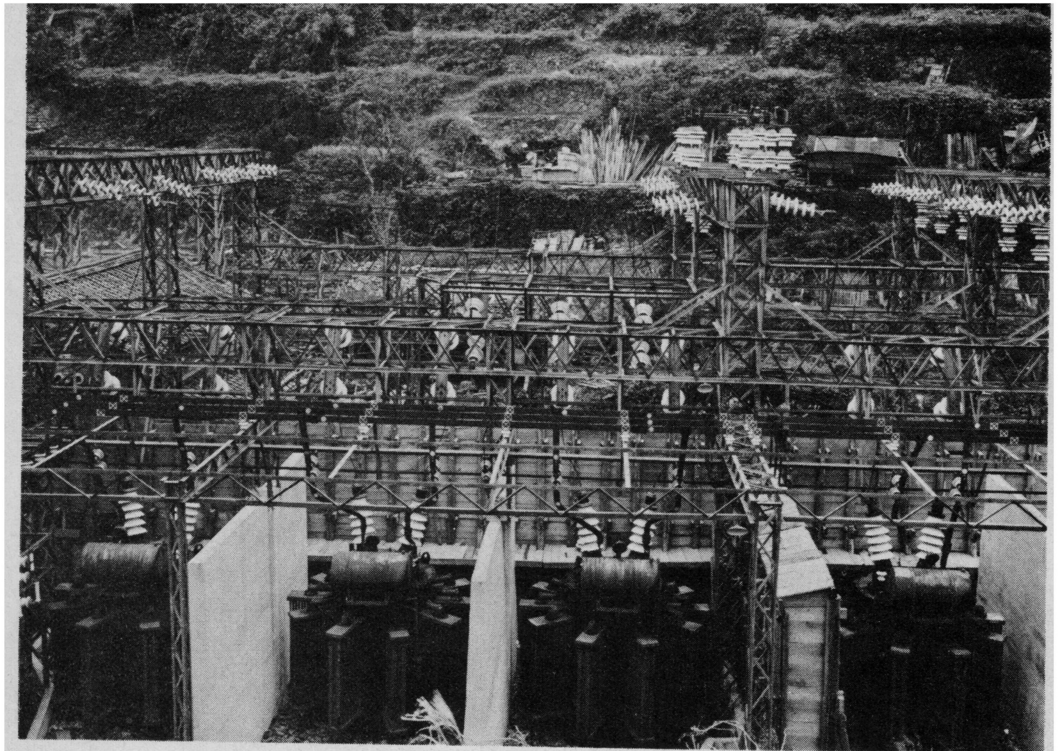

Figure 12.37b. Reinforced-concrete blast walls protecting transformers (1 mile from ground zero at Nagasaki).

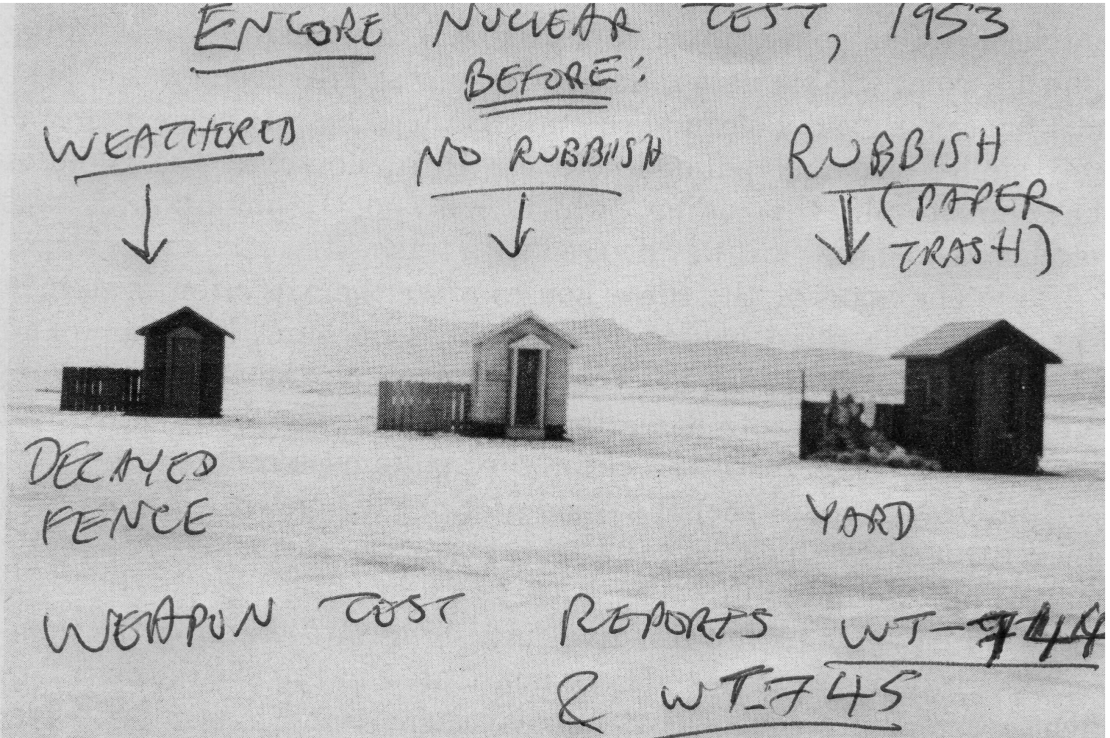

Figure 7.82. Wooden test houses before exposure to a nuclear explosion, Nevada Test Site.

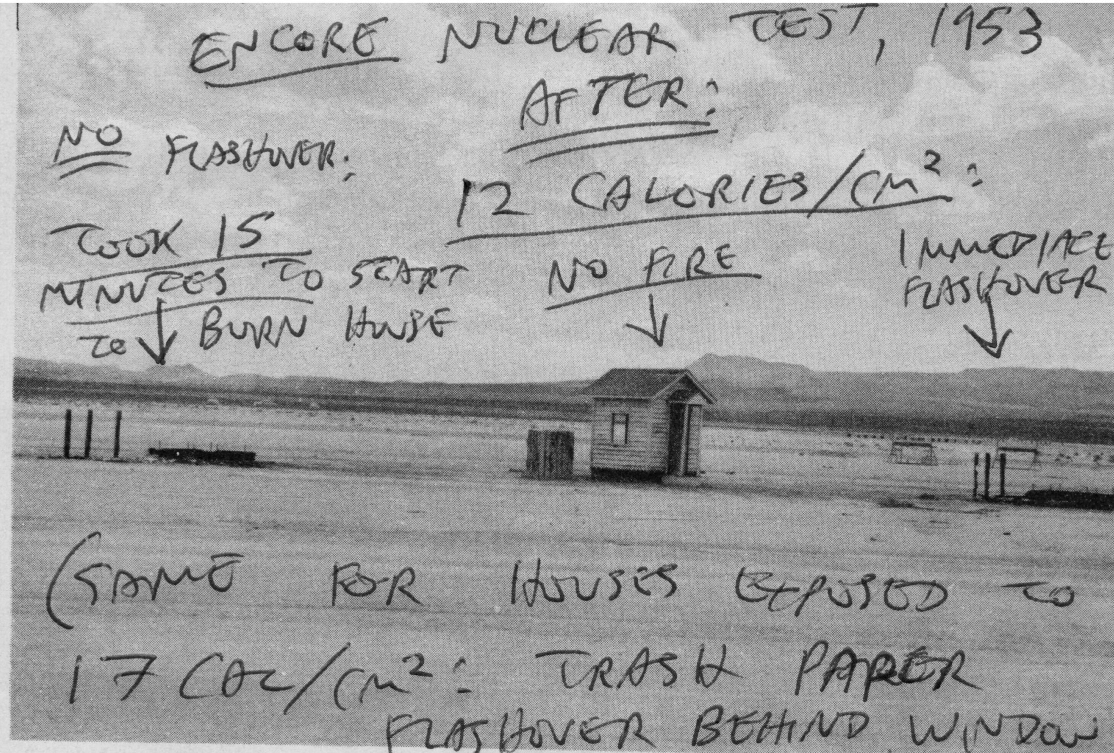

Figure 7.83. Wooden test houses after exposure to the nuclear explosion.

Glasstone 1957